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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------|
| 09/691,413  | 10/18/2000  | Sang-Hee Lee         | C34037/118297           | 4314             |
| 7590  | 03/18/2004  |                      | EXAMINER                |                  |
| BRYAN CAVE LLP<br>1290 Avenue of the Americas<br>New York, NY 10104 |             |                      | CHEN, WENPENG           |                  |
|   |             |                      | ART UNIT                | PAPER NUMBER     |
|   |             |                      | 2624                    |                  |
|   |             |                      | DATE MAILED: 03/18/2004 |                  |
|   |             |                      | (2)                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

AP

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 09/691,413             | LEE ET AL.          |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Wenpeng Chen           | 2624                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM

#### THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed

- after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 08 December 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,30,31,33-35,37-39 and 41-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,30,31,33-35,37-39 and 41-53 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 12/8/2003 has been entered.

***Examiner's responses to Applicant's remark***

2. Applicants filed a declaration under 37 C.F.R. 1.131 to claim that at least Claim 1 is conceived and reduced to practice prior to the earliest stated U.S. filing date (9/20/1996) of Haskell et al. (US patent 6,005,622.) Therefore, Haskell is not qualified as a prior art reference under 35 U.S.C. 102(e).

As a consequence, new ground(s) of rejections are provided below. Applicants' arguments with respect to all the pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

3. Claims 30, 34, 38, 42, and 48-52 are objected to because of the following informalities:

-- In Claims 1, 33, 37, and 41, the term "left upper block" is used, but a term "the upper left block" is referred in Claims 30, 34, 39, and 43. These two terms must make in agreement with each other.

-- The word "method" in line 4, Claim 48 shall be changed to "apparatus" because a method cannot comprise a circuitry.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

4. Claims 41-43 and 53 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The listed claims claim bit stream that are non-functional descriptive material (mere data) per se. Bit stream is still mere data and is non-functional descriptive material.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 30-31, 33-35, 37-39, and 41-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriacose et al. (US patent 5,11,292) in view of Graham (US patent 2,905,756.)

For Claims 37-39, Kuriacose a block based video coding apparatus (Figs. 1 and 3) comprising means for:

- generating a predictive DC value of the a DC value of the target block; (column 6, lines 33-46; The DPCM inherently required the predictive value.)
- performing DPCM coding on the predictive DC value and the DC value of the target block, therefore generating video information; (column 6, lines 33-46)
- transmitting the video information to a decoder. (Figs. 1 and 3)

However, Kuriacose does not teach the features related to generating a predictive DC value with a selected DC value as recited in the above claims.

Graham teaches a DPCM coding system comprising means for:

- (a) selecting a value a left pixel and a upper pixel based on a comparison of a first value and a second value, the first value being a difference between values of a left upper pixel and the left pixel, the second value being a difference between DC values of the left upper pixel and the upper pixel; (Fig. 3; column 6, lines 27-47;  $S_{01}$  is the upper pixel.  $S_{10}$  is the left pixel.  $S_{11}$  is the upper left pixel.) wherein

- obtaining a first differential value which is a difference between values of the upper left pixel and the upper block pixel; (Eqs. 3 and 4)
- obtaining a second differential value which is a difference between values of the upper left pixel and the left pixel; (Eqs. 3 and 4)

- comparing the first differential value with the second differential value; (Eqs. 3 and 4)
- selecting the value of the upper pixel, if the first differential value is larger than the second differential value; (Eq. 3)
  - selecting the value of the left pixel, if the first differential value is smaller than the second differential value; (Eq. 4)
  - wherein the first differential value and second differential value are absolute values; (Eqs. 3 and 4)

-- (b) predicting the selected value as a value of a target pixel, thereby generating a predictive value of the target pixel. (Fig. 3; column 6, lines 27-47; S<sub>00</sub> is the target pixel.)

It is desirable to have a better compression of an image value array. The objection can be achieved with a better prediction for a target image data value. It was obvious to one of ordinary skill in the art, at the time of the invention to know that the DC components of Kuriacose's blocks form an image value array. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to use Graham's adaptive prediction means for Kuriacose's DPCM for coding the DC values of each block because the combination improves compression.

In the combination:

-- the values of Graham's left, upper, and upper left pixels are substituted with Kuriacose's DC values of a left block (B3), upper block (B2), and upper left block (B1), respectively, for prediction process.

The above passages also teach the corresponding methods of Claims 1, 30-31, and 33-35.

For Claims 48-52, the above-cited passages of Kuriacose and Graham, their combination, and motivation also teach:

-- the selector circuitry recited in Claims 48, 49; (Fig. 3 of Graham)

-- the differential pulse code modulation coder recited in Claims 48 and 52; (110 of Fig. 3 of Kuriacose);

-- memory circuitry recited in Claim 50; (Fig. 3 of Graham; The computer receives all the three values. Inherently, the computer has a memory to store the values.)

-- the first and second subtractors and the comparator recited in Claim 50; (Fig. 3 of Graham; The computer generates results according to Eqs. 3 and 4. Therefore, the computer has the components.)

-- the absolute value calculator recited in Claim 51. (Fig. 3 of Graham; The computer generates results according to Eqs. 3 and 4. Therefore, the computer has the component.)

The above-cited passages of Kuriacose and Graham, their combination, and motivation therefore also teach the methods of Claims 44-47 corresponding to the apparatuses recited in Claims 48-51.

Because bit stream is generated, the above passages also teach the corresponding bit stream of Claims 41-43 and 53.

***Double Patenting***

7. Claims 33-35 are objected to under 37 CFR 1.75 as being duplicates of Claims 1, 30, and 31, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen  
Primary Examiner  
Art Unit 2624

March 12, 2004

